

IN THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

A2 1. (currently amended) A method for merging contiguous like commands for transfers between a storage medium and memory, comprising:

accumulating a plurality of commands in a queue while a first command is being processed by the storage medium, each of the plurality of commands including a command data block (CDB) and a scatter gather list (SGL), the CDB configured to identify a location of a file on the storage medium, the SGL configured to include data pointers identifying a location of data in the memory;

examining the plurality of commands in the queue while the first command is being processed, the examining further including,

checking if any of the plurality of commands are like commands through analysis of the CDB, each of the like commands corresponding to a file stored on a storage medium; and

determining if any of the files on the storage medium are stored contiguously with respect to one another through analysis of the CDB;

combining the like commands corresponding to contiguous files as a combined command; and

issuing the combined command to the storage medium upon completion of the processing of the first command.

2. (original) The method as recited in claim 1, wherein the storage medium is a hard drive.

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3. (canceled)

4. (original) The method as recited in claim 1, further including:
providing a multithread environment, the multithread environment allowing multiple read and write commands to be processed concurrently.

5. (original) The method as recited in claim 1, wherein the combined command is transparent to the operating system.

6. (original) The method as recited in claim 3, wherein the SGL of the combined command is expanded from the SGL of a non-combined command.

7. (currently amended) A method for combining commands for data transfer between a drive and memory, comprising:

receiving multiple read or write commands in a queue, each read and write command includes a command data block (CDB) and a scatter gather list (SGL), the CDB configured to identify a location of a file on the drive, the SGL being configured to include data pointers identifying a location of data in the memory;

processing a first command of the multiple read or write commands;

examining the multiple read or write commands, the examining including,

identifying like commands of the multiple read or write commands through analysis of the CDB while processing the first command, each of the like commands being associated with a file stored on the drive, and

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examining one of the CDB and the SGL to ascertain ascertaining which of the files associated with the like commands are contiguous files;

creating a combined command, the combined command being configured to consolidate the identified like commands being associated with contiguous files; and

issuing the combined command to the drive.

8. (original) The method as recited in claim 7, further including:

providing a multithread environment, the multithread environment allowing multiple read and write commands to be processed concurrently.

9. (canceled)

10. (original) The method as recited in claim 7, wherein the queue has a capacity of 256 commands.

11. (original) The method as recited in claim 7, further including:
processing the combined command; and

generating one interrupt for the processed combined command.

12. (currently amended) An apparatus for merging contiguous like commands, comprising;

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an operating system, the operating system generating read and write commands; a storage media, the storage media being configured to process read and write commands, the read and write commands being associated with files stored on the storage media, each read and write command is associated with a command data block (CDB) and a scatter gather list (SGL), the CDB being configured to identify the location of corresponding files on the storage media, the SGL being configured to include data pointers identifying a location of data in the memory; and

a driver queue, the driver queue being configured to receive the read and write commands from the operating system, the CDB for the corresponding read and write commands indicating ~~being examined in the driver queue to identify~~ like commands associated with contiguous files on the storage media, the identified commands and respective CDB and SGL associated with the identified commands being consolidated combined into a single one command, the single one command being issued to the storage media.

13. (original) The apparatus of claim 12, wherein the storage media is a hard drive.

14. (original) The apparatus of claim 12, further including:

a multithread environment, the multithread environment allowing for multiple combined commands to be processed concurrently.

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15. (canceled)

16. (currently amended) The apparatus of claim 12 +5, wherein the SGL of the combined command is expanded from the SGL of a non-combined command.

17. (currently amended) A computer readable media having program instructions for combining commands for data transfer between a drive and memory, comprising:

program instructions for receiving multiple read or write commands in a queue, each read and write command includes a command data block (CDB) and a scatter gather list (SGL), the CDB configured to identify a location of a file on the drive, the SGL being configured to include data pointers identifying a location of data in the memory;

program instructions for processing a first command of the multiple read or write commands;

program instructions for combining multiple read or write commands, the combining including,

program instructions for identifying like commands of the multiple read or write commands through analysis of the CDB while processing the first command, each of the like commands being associated with a file stored on the drive, and

program instructions for examining one of the CDB and the SGL to ascertain ascertaining which of the files associated with the like commands are contiguous files;

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and
program instructions for creating a combined command, the combined command being configured to consolidate the identified like commands being associated with contiguous files; and

program instructions for issuing the combined command to the drive.

18. (original) The computer readable media as recited in claim 17, further including:

program instructions for providing a multithread environment.

19. (canceled)

20. (original) The computer readable media as recited in claim 17, wherein the drive is a hard drive.